# HK, INC. P7M13 PISTOL

Technical Manual
for
Dealer/Factory Maintenance

January 1984

Heckler and Koch, Inc.
14601 Lee Road
Chantilly, Virginia 22021
(703) 631-2800

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# Contents


Page

**1 Weapon Description** ..... 6
1.1 General ..... 6
1.1.1 Dimensions ..... 6
1.1.2 Weights ..... 6
1.1.3 Operating Data ..... 7
1.2 Major Assembly Groups ..... 7
1.2.1 Slide ..... 7
1.2.2 Receiver ..... 7
1.2.3 Magazine ..... 7
1.3 Component Parts ..... 7
**2 Disassembly** ..... 10
2.1 Group Disassembly ..... 10
2.1.1 Clear the Piece ..... 10
2.1.2 Magazine Assembly Group ..... 10
2.1.3 Disassembly of Slide Assembly Group From Barrel and Receiver Group ..... 10
2.2 Disassembly of the Slide ..... 12
2.2.1 Firing Pin Assembly ..... 12
2.2.2 Firing Pin Block and Firing Block Spring ..... 12
2.2.3 Removal of Sights ..... 12
2.2.4 Extractor, Extractor Detent , and Extractor Spring ..... 13
2.2.5 Piston ..... 13
2.3 Disassembly of the Barrel and Receiver Group ..... 13
2.3.1 Recoil Spring ..... 13
2.3.2 Stocks ..... 13
2.3.3 Sear Lever Spring ..... 13
2.3.4 Cocking Lever and Grip Pin ..... 14
2.3.5 Cocking Grip and Cocking Lever ..... 14
2.3.6 Sear Lever ..... 14
2.3.7 Trigger and Grip Pin, Trigger, Trigger Bar, Trigger Return Spring, and Disconnector ..... 14
2.3.8 Locking Pin, Slide Stop, and Slide Release Spring ..... 14
2.3.9 Locking Pin, Rocker, Magazine Catch, Magazine Catch Spring, Cocking Latch, Cocking Latch Spring, Cocking Lever Stop, and Cocking Lever Stop Pin ..... 14
2.3.10 Cocking Lever Stop Pin and Cocking Lever Spring ..... 15
2.3.11 Disassembly Button, Disassembly Button Spring, Disassembly Button/ Front Sight Pin ..... 15
2.3.12 Trigger Guard Cover ..... 15
2.4 Disassembly of the Magazine ..... 15
**3 Assembly** ..... 16
3.1 Magazine ..... 16
3.2 Barrel and Receiver Group ..... 16
3.2.1 Trigger Guard Cover ..... 16
3.2.2 Disassembly Button, Disassembly Button Spring, and Disassembly Button/Front Sight Pin ..... 16
3.2.3 Cocking Lever Stop Pins and Cocking Lever Spring ..... 16
3.2.4 Cocking Latch, Cocking Latch Spring, Cocking Lever Stop, Rocker, Magazine Catch, Magazine Catch Spring and Locking Pin ..... 16
3.2.5 Locking Pin, Slide Stop, and Slide Release Spring ..... 16
3.2.6 Disconnector ..... 16
3.2.7 Trigger Bar, Trigger, Trigger Return Spring, and Trigger and Grip Pin ..... 17

# Contents


Page

3.2.8 Sear Lever ..... 17
3.2.9 Cocking Lever, Cocking Grip, and Cocking Lever and Grip Pin ..... 17
3.2.10 Sear Lever Spring ..... 17
3.2.11 Stocks ..... 17
3.2.12 Recoil Spring ..... 17
3.3 Assembly of the Slide ..... 17
3.3.1 Piston ..... 17
3.3.2 Extractor, Extractor Detent and Extractor Spring ..... 17
3.3.3 Front and Rear Sights ..... 17
3.3.4 Firing Pin Block and Firing Pin Block Spring ..... 17
3.3.5 Firing Pin Assembly ..... 17
3.4 Assembly of the Groups ..... 17
3.4.1 Slide ..... 17
3.4.2 Magazine ..... 18
**4 Functioning** ..... 18
4.1 Steps ..... 18
4.1.1 First Step—Weapon Loaded and Uncocked ..... 18
4.1.2 Second Step—Weapon Loaded and Cocked ..... 18
4.1.3 Third Step—Weapon Fired ..... 19
4.1.4 Fourth Step—Weapon After Firing Last Round ..... 19
**5 Trouble Shooting** ..... 24
5.1 General ..... 24
5.2 Immediate Action ..... 24
5.2.1 Failure to Feed ..... 24
5.2.2 Failure to Eject ..... 24
5.2.3 Failure to Extract ..... 24
5.3 Other Stoppages ..... 24
5.3.1 Failure to Fire ..... 24
5.3.2 Slide Fails to Open After a Round is Fired ..... 24
5.3.3 Cartridge Case Fails to Eject ..... 24
5.3.4 Failure to Feed ..... 24
5.3.5 Slide Failure to Remain Open After Last Round Fired ..... 25
5.3.6 Slide Failure to Snap Forward ..... 25
5.3.7 Firing Pin Failure to Cock ..... 25
5.3.8 Firing Pin Fails to Snap ..... 25
5.3.9 Change of Bullet Impact Point ..... 25
**6 Care and Cleaning** ..... 25
6.1 Responsibility ..... 25
6.2 Tools and Materials ..... 26
6.2.1 Cleaning Rags ..... 26
6.2.2 Petroleum ..... 26
6.2.3 Gun Oil or Grease ..... 26
6.2.4 Chip of Wood ..... 26
6.3 Ordinary Cleaning and Lubrication ..... 26
6.3.1 Slide ..... 26
6.3.2 Barrel and Receiver ..... 26
6.3.3 Magazine ..... 26
6.4 Thorough Cleaning ..... 26
6.4.1 Slide ..... 26

# Contents


Page

6.4.2 Barrel and Receiver ..... 27
6.4.3 Magazine ..... 28
**7 Inspections** ..... 28
7.1 When ..... 28
7.2 How ..... 28
7.2.1 First Step ..... 28
7.2.2 Second Step ..... 28
7.2.3 Third Step ..... 28
7.2.4 Fourth Step ..... 28
7.2.5 Fifth Step ..... 28
**8 Operational Testing** ..... 30
8.1 Steps ..... 30
8.1.1 Step One ..... 30
8.1.2 Step Two ..... 30
8.1.3 Step Three ..... 30
8.1.4 Step Four ..... 30
8.1.5 Step Five ..... 30
8.1.6 Step Six ..... 30
8.1.7 Step Seven ..... 30
8.1.8 Step Eight ..... 30
**9 Barrel Replacement** ..... 30

# Figures


| Number | Description | Page |
|---|---|---|
| 1 | H&K Pistol P7M13 | 6 |
| 2 | Major assembly groups, H&K Pistol P7M13 | 7 |
| 3 | Component parts of the H&K Pistol P7M13 | 9 |
| 4 | Clearing the piece and disassembly of slide assembly group from the barrel and receiver group | 10 |
| 5 | Removal of the magazine | 11 |
| 6 | Disassembly of slide assembly group from the barrel and receiver group | 11 |
| 7 | Removal of the firing pin assembly | 12 |
| 8 | Removal of the firing pin block and spring | 13 |
| 9 | Removal of the H&K Pistol P7M13 extractor | 14 |
| 10 | Disassembly of the magazine | 15 |
| 11 | Replacing the firing pin block and spring | 18 |
| 12 | First step of functioning, H&K Pistol P7M13 (right side view) | 19 |
| 13 | First step of functioning, H&K Pistol P7M13 (left side view) | 20 |
| 14 | Second step of functioning, H&K Pistol P7M13 (loaded and cocked) | 21 |
| 15 | Third step of functioning, H&K Pistol P7M13 (pistol after firing) | 22 |
| 16 | Fourth step of functioning, H&K Pistol P7M13 (pistol after firing of last round) | 23 |
| 17 | Cleaning kit, H&K Pistol P7M13 | 27 |
| 18 | Gauging equipment | 29 |
| 19 | Inspection of firing pin rear protrusion | 31 |
| 20 | Inspection of firing pin front protrusion | 31 |

***Figure 1.*** *H&K Pistol, P7M13.*

## 1. Weapon Description

**1.1 General.** The Heckler and Koch, Inc. (HK, Inc.) Pistol P7M13 (Figure 1) is a recoil operated semiautomatic handgun designed for ambidextrous single hand use. It has a gas retarded inertia bolt system and polygon barrel. The weapon's 9mm x 19mm Parabellum ammunition is fed from a 13-round straight magazine.

***1.1.1 Dimensions.*** Dimensions of the H&K Pistol P7M13 are as follows:

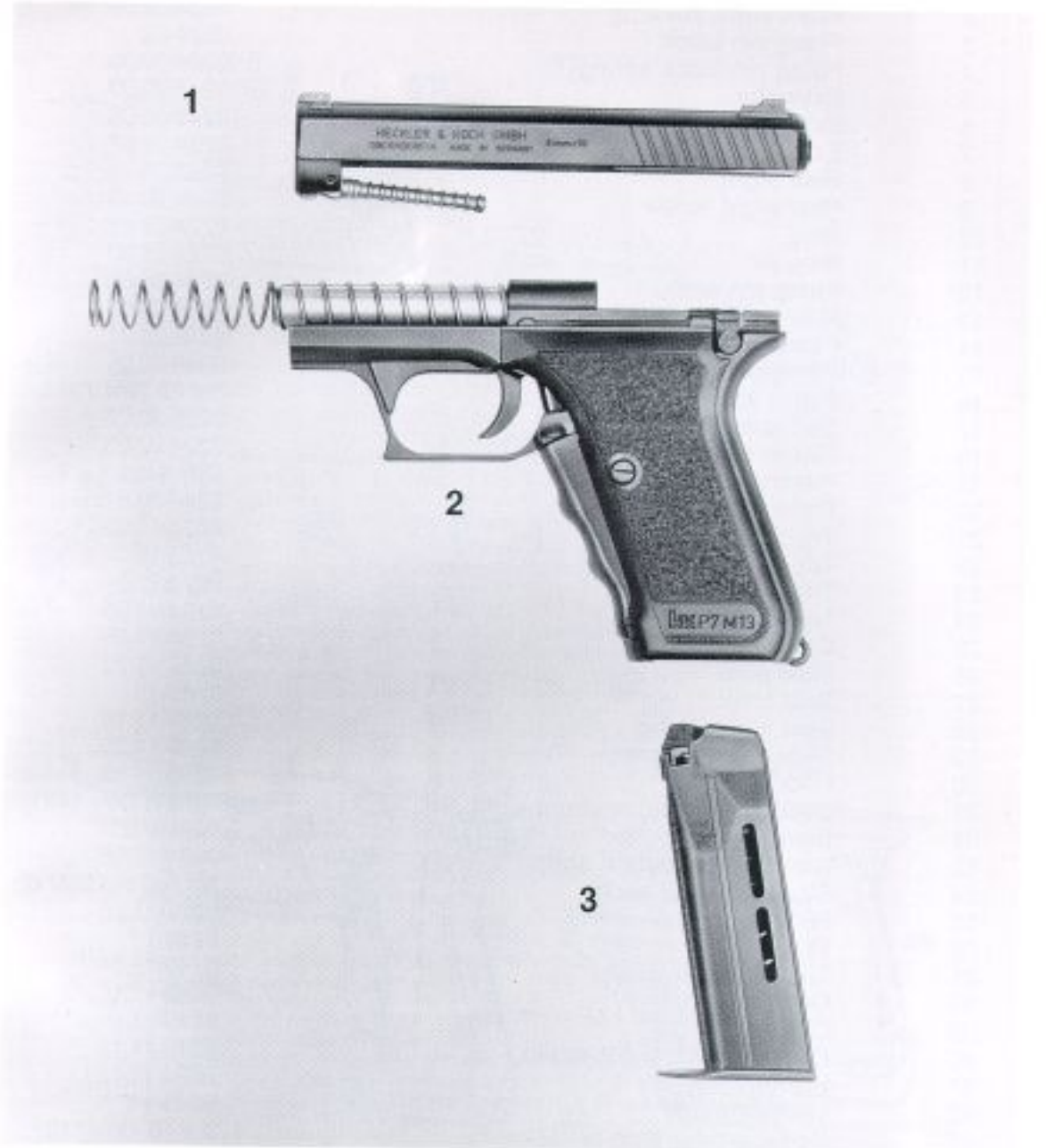
| Dimension | Measurement |
|---|---|
| Overall length | 6.65 inches (169 mm) |
| Height | 5.31 inches (135 mm) |
| Width across grips | 1.30 inches ( 33 mm) |
| Barrel length | 4.13 inches (105 mm) |
| Sight radius | 5.83 inches (148 mm) |

***1.1.2 Weights.*** Weights of the H&K Pistol P7M13 are as follows:

| Item | Weight |
|---|---|
| Pistol w/o magazine | 1.875 lbs (850 grams) |
| Pistol with unloaded magazine | 2.15 lbs (975 grams) |
| Weight of empty magazine | 4.4 oz. (125 grams) |

***Figure 2.*** *Major assembly groups, H&K Pistol, P7M13.*

*1 Slide*
*2 Receiver*
*3 Magazine*




| | |
|---|---|
| Weight of loaded magazine (13 rds) | Approx. 10.05 oz (285 grams) |
| Weight of pistol w/loaded magazine | Approx. 2.5 lbs (11.35 grams) |

***1.1.3 Operating Data***

| ***Item*** | ***Data*** |
|---|---|
| Action | Retarded inertia bolt |
| Muzzle velocity | Ammunition dependent approximately 1,150–1,400 feet per second (350–425 meters per second) |

**1.2 Major Assembly Groups.** The H&K Pistol P7M13 has three (3) major group assemblies (Figure 2). These groups are:

***1.2.1 Slide***

***1.2.2 Receiver***

***1.2.3 Magazine***

**1.3 Component Parts.** Component parts of H&K Pistol P7M13 assembly groups (Figure 3) are as follows:

| Figure Part No. | Nomenclature | Part No. | ID No. |
|---|---|---|---|
| 1 | Slide | 9249-21 | 222686 |
| 2 | Front sight (6.4 mm) | 9224-22.09 | 222220 |
| 3 | Firing pin block | 9224-28 | 221874 |
| 4 | Firing pin block spring | 9224-20.06 | 221899 |
| 5 | Extractor | 9249-20.09 | 222849 |
| 6 | Extractor detent | 9249-20.08 | 222819 |
| 7 | Extractor spring | 9224-20.07 | 221896 |
| 8 | Rear sight | 9249-24 | 222817 |
| 9 | Rear sight screw | 9249-20.10 | 222820 |
| 10 | Ring | 9224-26.07 | 221889 |
| 11 | Ring pin | 9224-26.09 | 221908 |
| 12 | Firing pin rebound spring | 9224-26.05 | 221898 |
| 13 | Main spring | 9224-26.03 | 221897 |
| 14 | Firing pin | 9249-26.01 | 222822 |
| 15 | Firing pin retainer | 9249-20.05 | 222683 |
| 16 | Piston locking pin | 3 × 12 DIN 7344 | 928333 |
| 17 | Bolt compression | 9225-30.03 | 222478 |
| 18 | Piston locking spring | 9224-20.03 | 221895 |
| 19 | Piston retaining pin | DIN 1481-1 × 6 | 929899 |
| 20 | Piston | 9249-30.01 | 222853 |
| 21 | Trigger return spring | 9224-11.08 | 221877 |
| 22 | Trigger | 9249-16 | 222670 |
| 23 | Trigger and grip pin | 9224-11.04 | 221880 |
| 24 | Trigger bar | 9224-11.05 | 222282 |
| 25 | Disconnector | 9224-11.06 | 221857 |
| 26 | Slide stop | 9249-11.21 | 222674 |
| 27 | Sear lever | 9249-18 | 222814 |
| 28 | Sear lever spring | 9249-11.18 | 222892 |
| 29 | Slide release spring | 9249-11.20 | 222681 |
| 30 | Locking pin | 9224-11.13 | 221890 |
| 31 | Disassembly button/front sight pin | 1.5 × 8 DIN 1481 | 971919 |
| 32 | Disassembly button | 9249-11.01 | 222671 |
| 33 | Disassembly button spring | 9224-11.02 | 221871 |
| 34 | Stock screw (2 each) | M4 × 6 Ko DIN 85 | 928691 |
| 35 | Recoil spring | 9224-11.26 | 221870 |
| 36 | Receiver | 9249-13 | 222668 |
| 37 | Trigger guard cover | 9249-13.01 | 222645 |
| 38 | Cocking grip | 9249-11.17 | 222900 |
| 39 | Cocking lever | 9249-11.16 | 222673 |
| 40 | Cocking lever and grip pin | 9249-11.19 | 222644 |
| 41 | Rocker | 9224-11.12 | 221864 |
| 42 | Locking pin | 9249-11.14 | 222646 |
| 43 | Cocking lever stop pin (2 each) | 3 × 10 DIN 1481 | 922606 |
| 44 | Cocking lever stop | 9224-11.09 | 222186 |
| 45 | Cocking latch | 9224-11.10 | 221863 |
| 46 | Cocking latch spring | 9224-11.11 | 221872 |
| 47 | Cocking lever spring | 9224-11.15 | 221875 |
| 48 | Left stock | 9249-17 | 222656 |
| 49 | Right stock | 9249-19 | 222658 |
| 50 | Magazine catch | 9249-15 | 222669 |
| 51 | Magazine catch spring | 9249-11.03 | 222672 |
| 52 | Magazine housing | 9249-51 | 222651 |
| 53 | Magazine follower | 9249-50.03 | 222660 |
| 54 | Magazine follower insert | 9249-50.04 | 222734 |
| 55 | Magazine follower spring | 9249-50.05 | 222661 |
| 56 | Magazine locking plate | 9249-50.07 | 222662 |
| 57 | Magazine floor plate | 9249-50.09 | 222663 |
| 58 | Stock screw lock retainer (2 each) | DIN 6797-J4, 3 Mnph r | |
| 59 | Slide stop/disconnector pin | 9224-14.05 | 221894 |
| 60 | Barrel | 9229-14.03 | 222518 |
| 61 | Beta sights (only on commercial models) | | |

*Figure 3. Component parts of the H&K Pistol P7M13.*

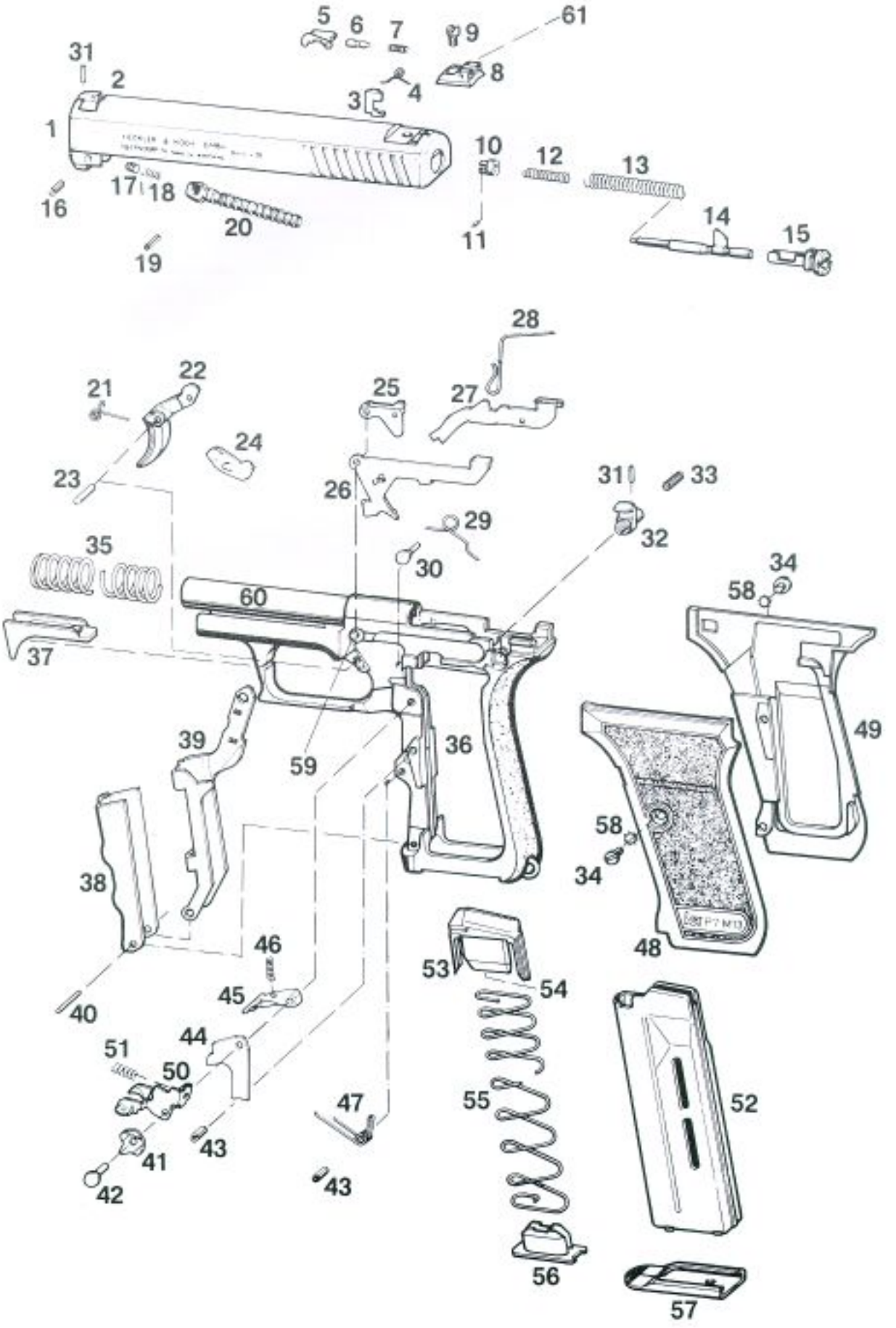


*Figure 4. Clearing the piece and disassembly of slide assembly group from the barrel and receiver group.*

## 2. Disassembly

**2.1 Group Disassembly.** Disassembly of the H&K Pistol P7M13 into its three principal groups is all that is required for normal maintenance. Those weapons purchased directly from Heckler and Koch, Incorporated (HK, Inc.) have a five-year limited warranty, and their barrels are guaranteed to fire up to 10,000 rounds. If malfunctions covered by the warranty occur, the weapon will be replaced or repaired by HK, Inc. After expiration of the warranty, damaged weapons will be refurbished by HK, Inc. at a nominal cost. Nevertheless, when and wherever further disassembly of H&K Pistol P7M13 is required, these operations may be accomplished as follows:

***2.1.1 Clear the Piece.*** Hold the H&K Pistol P7M13 with the right hand (Figure 4) and pull the slide (Part 1, Figure 2) to the rear with the left hand. As the slide is pulled to the rear and locked in its rearmost position, look into the chamber and ensure that it is empty.

***2.1.2 Magazine Assembly Group.*** After ensuring that the piece is clear of rounds, the magazine assembly group (Part 3, Figure 2) is removed from the H&K Pistol P7M13. This is accomplished by depressing the magazine catch (Part 50, Figure 3) with the thumb of either hand and catching the released magazine with the other hand (Figure 5).

***2.1.3 Disassembly of Slide Assembly Group From Barrel and Receiver Group.*** To disassemble the slide assembly group from the barrel and receiver group, let the slide snap forward by squeezing the cocking grip (Part 38, Figure 3). When the slide is in its forward position, press the disassembly button (Part 32, Figure 3) and pull the slide to the rear as shown in Figure 4. As the slide is pulled to

***Figure 5.*** *Removal of the magazine.*

***Figure 6.*** *Disassembly of slide assembly group from the barrel and receiver group.*

***Figure 7.*** *Removal of the firing pin assembly.*

the rear, lift it up and off the barrel and receiver group assembly as shown in Figure 6.

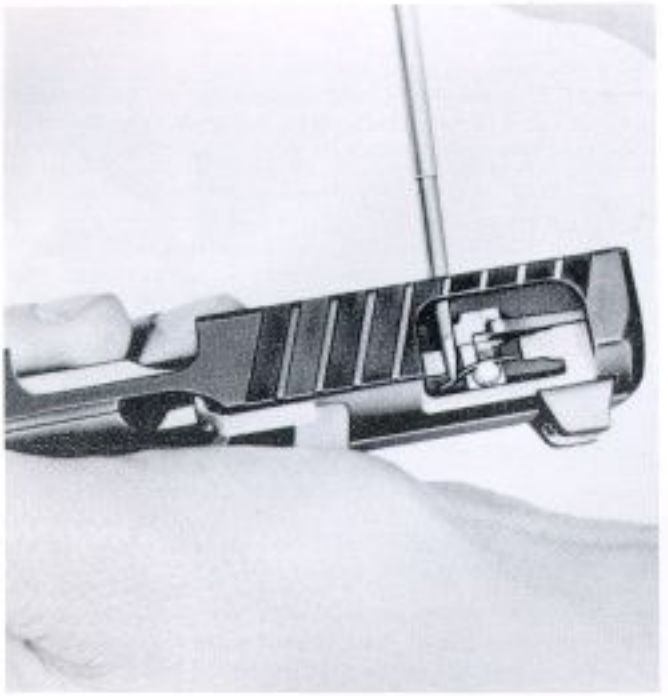
**2.2 Disassembly of the Slide.**

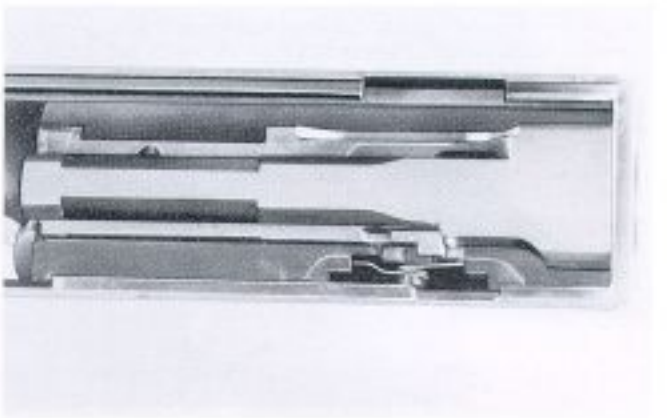
***2.2.1 Firing Pin Assembly.*** With the weapon fully assembled, the firing pin assembly (Parts 10–15, Figure 3) is removed from the slide (Part 1, Figure 3) by holding the pistol with either hand placing the thumb of the opposite hand on the firing pin retainer (Part 15, Figure 3) at the rear of the slide (Figure 7). Slightly squeeze the cocking grip while simultaneously depressing and rotating the firing pin retainer clockwise forty-five degrees. The cocking grip is squeezed, and the firing pin assembly slides out of its recess without force. All parts of the firing pin assembly are removed from the slide as a single unit. Further disassembly of this unit seldom is required for normal maintenance as the firing pin (Part 14, Figure 3) is made of high quality steel that seldom if ever breaks. All parts of the firing pin assembly also can be cleaned thoroughly without further disassembly. If replacement of a firing pin assembly part is required, however, further disassembly is accomplished by removing the firing pin retainer (Part 15, Figure 3) and drifting the ring pin (Part 11, Figure 3) out of the firing pin (Part 14, Figure 3). Note: the firing pin is subject to pressure of its main spring (Part 13, Figure 3). Remove the ring (Part 10, Figure 3), the firing pin rebound spring (Part 12, Figure 3), and the main spring. Do not pull, bend, twist, or otherwise destroy the spring's tension.

***2.2.2 Firing Pin Block and Firing Pin Block Spring.*** The firing pin block (Part 3, Figure 3) should not, repeat not, be removed for maintenance in the field as this is not required for normal care and cleaning operations. Where its disassembly is required, however, it can be accomplished readily by using a screw driver. Press this tool against the cropped shank at the bottom of the firing pin block spring, unhinge it, and move the spring aside (Figure 8). Both the firing pin block and firing pin block spring come out of the slide upon release of the pressure of the firing pin block spring.

***2.2.3 Removal of Sights.*** Both front (Part 2, Figure 3) and rear (Part 8, Figure 3) sights are

***Figure 8.*** *Removal of the firing pin block and spring.*





removed by removing their respective pin (Part 31, Figure 3) or screw (Part 9, Figure 3) and drifting the sights from their respective recesses. In the case of the front sight, its pin is drifted out from the top.

***2.2.4 Extractor, Extractor Detent, and Extractor Spring.*** The extractor (Part 5, Figure 3), extractor detent (Part 6, Figure 3), and extractor spring (Part 7, Figure 3) are removed from the slide with the aid of two punches as shown in Figures 8 and 9. A punch is inserted into the extractor groove of the slide as shown in Figure 9. Pressure is then applied to push the extractor detent to the rear. As pressure is applied, a small punch is inserted into the hole on the bottom of the slide (Figure 9) to drift the extractor out through the cartridge case ejection slot. Following the removal of the extractor, the extractor detent and extractor spring are removed by lightly tapping them out of the slide.

***2.2.5 Piston.*** The piston (Part 20, Figure 3) may be thoroughly cleaned while it remains attached to the slide. Where its removal is required, however, this operation may be accomplished by using a drift punch to remove the piston locking pin (Part 16, Figure 3), bolt compression (Part 17, Figure 3), piston locking spring (Part 18, Figure 3) and piston retaining pin (Part 19, Figure 3).

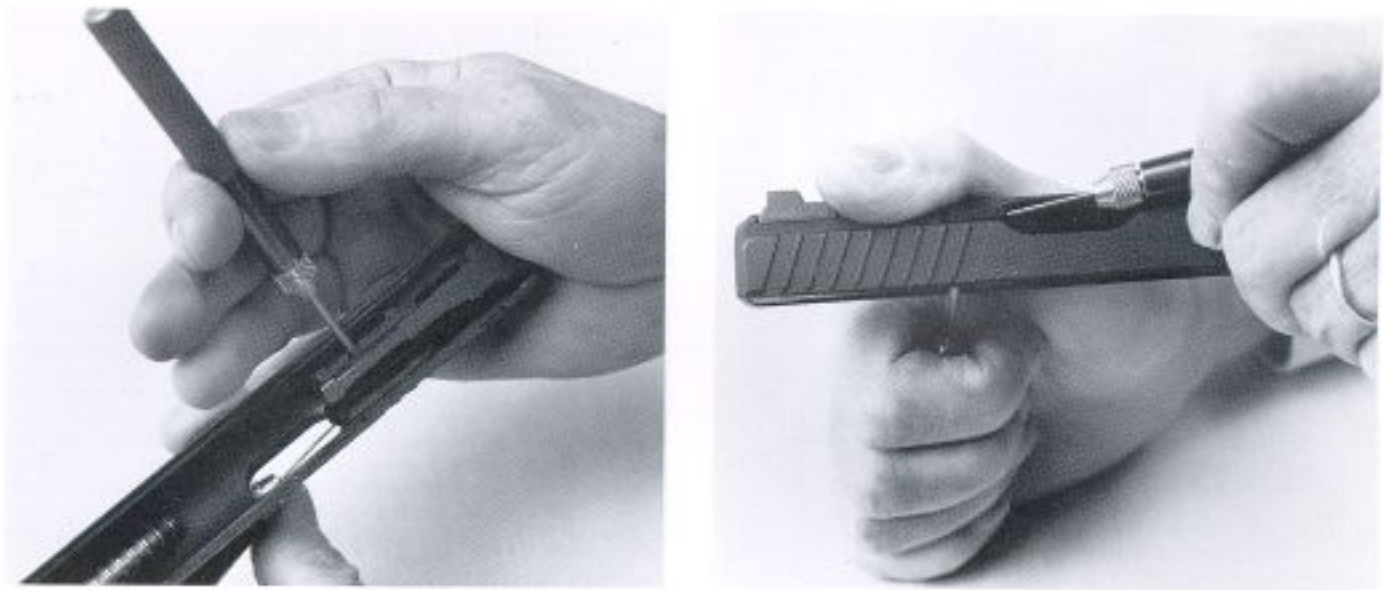
**2.3 Disassembly of the Barrel and Receiver Group.** Following disassembly of the slide assembly group, the barrel and receiver group is disassembled as follows:

***2.3.1 Recoil Spring.*** Lift the recoil spring (Part 35, Figure 3) off of the barrel.

***2.3.2 Stocks.*** First, remove the magazine. Both the left (Part 48, Figure 3) and right (Part 49, Figure 3) stocks are removed by unscrewing the stock screws (Part 34, Figure 3) and pushing the stocks toward the muzzle end of the barrel while lifting them off of the receiver. In removing the stock screws, care must be exercised to secure the stock screw retainer (Part 58, Figure 3).

***2.3.3 Sear Lever Spring.*** The sear lever spring (Part 28, Figure 3) is disengaged from the knobs on the cocking lever (Part 39, Figure 3)

***Figure 9.*** *Removal of H&K Pistol P7M13 extractor.*



and the sear lever (Part 27, Figure 3) with a punch or screw driver. The spring then is removed gently by manipulating it through the hole on the side knob of the cocking lever. Care must be exercised not to destroy the spring's tension.

***2.3.4 Cocking Lever and Grip Pin.*** The cocking lever and grip pin (Part 40, Figure 3) is removed out of the hole in the cocking grip (Part 38, Figure 3) and cocking lever (Part 39, Figure 3) with a punch. While removing the lever and grip pin, maintain pressure on the cocking grip with either hand.

***2.3.5 Cocking Grip and Cocking Lever.*** Following removal of the lever and grip pin, release pressure on the cocking grip and remove the cocking grip (Part 38, Figure 3) and cocking lever (Part 39, Figure 3) with the fingers.

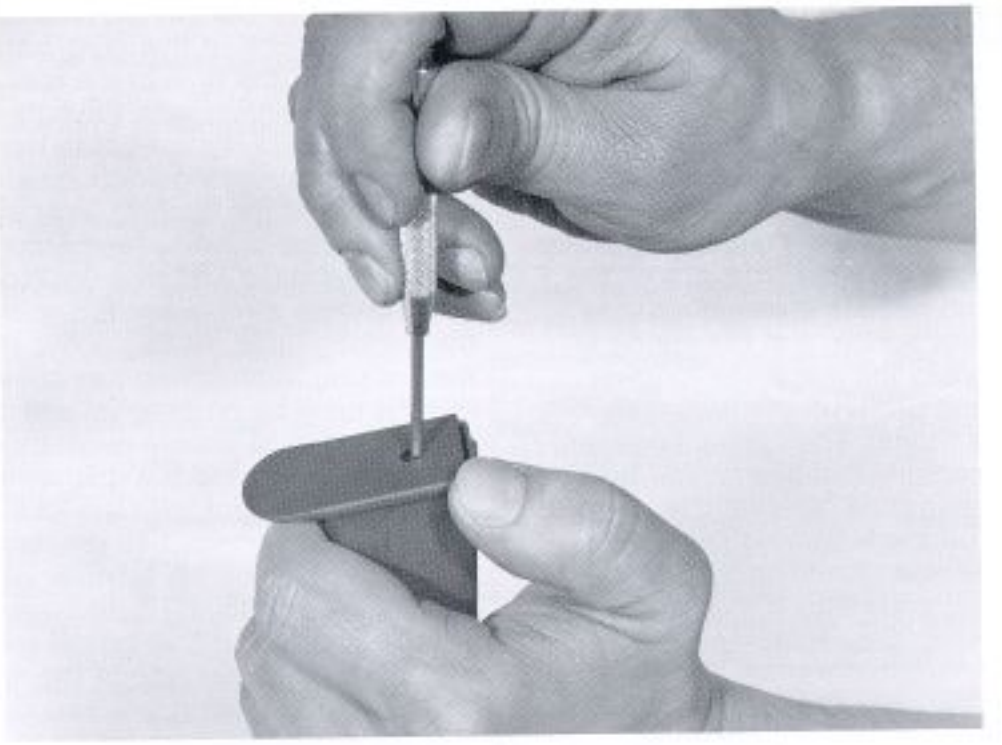
***2.3.6 Sear Lever.*** Lift the sear lever (Part 27, Figure 3) out of the receiver.

***2.3.7 Trigger and Grip Pin, Trigger, Trigger Bar, Trigger Return Spring and Disconnector.*** Removal of the trigger and grip pin (Part 23, Figure 3) is accomplished with a punch by removing the trigger and grip pin while holding the trigger in place with a thumb. After the pin is removed, the trigger (Part 22, Figure 3), trigger bar (Part 24, Figure 3), trigger return spring (Part 21, Figure 3), and disconnector (Part 25, Figure 3) are removed from the receiver.

***2.3.8 Locking Pin, Slide Stop, and Slide Release Spring.*** The locking pin (Part 30, Figure 3) is drifted up and out of the receiver. This permits removal from the receiver housing of the slide stop (Part 26, Figure 3), and the slide release spring (Part 29, Figure 3).

***2.3.9 Locking Pin, Rocker, Magazine Catch, Magazine Catch Spring, Cocking Latch, Cocking Latch Spring, Cocking Lever Stop, and Cocking Lever Stop Pin.*** The locking pin (Part 42, Figure 3) is drifted out of the receiver housing frame, and the rocker (Part 41, Figure 3) is removed along with the magazine catch (Part 50, Figure 3), magazine catch spring (Part 51, Figure 3), cocking lever stop (Part 44, Figure 3), cocking latch (Part 45, Figure 3), and cocking latch spring (Part 46, Figure 3). The

***Figure 10.*** *Disassembly of the magazine.*



first cocking lever stop pin (Part 43, Figure 3) serves only to provide a support for the cocking lever stop and the cocking lever spring. This pin was used only to facilitate manufacture. It does not need to be removed unless visibly damaged.

***2.3.10 Cocking Lever Stop Pin and Cocking Lever Spring.*** The second cocking lever stop pin (Part 43, Figure 3) is drifted out of its hole in the receiver housing, and the cocking lever spring (Part 47, Figure 3) is removed.

***2.3.11 Disassembly Button, Disassembly Button Spring, and Disassembly Button/Front Sight Pin.*** The disassembly button (Part 32, Figure 3) is removed by removing the disassembly button pin (Part 31, Figure 3) with the aid of a punch and drifting out both the disassembly button and its spring (Part 33, Figure 3).

***2.3.12 Trigger Guard Cover.*** The trigger guard cover (Part 37, Figure 3) is removed by inserting a small screw driver under the rear edge of the cover and disengaging its tip from the receiver housing frame by pushing the cover upward and to the rear. No further disassembly of the barrel and receiver group is required.

**2.4 Disassembly of the Magazine.** The magazine assembly is disassembled by pushing with a punch on the button of the magazine locking plate (Part 56, Figure 3) that emerges through the hole in the magazine floor plate (Part 57, Figure 3) and sliding the magazine floor plate off of the grooves in the magazine housing (Part 52, Figure 3) as shown in Figure 10. While doing this with one hand, the thumb of the other hand is used to guard against the magazine locking plate flying out of the housing and becoming lost as it is under pressure of the magazine follower spring (Part 55, Figure 3). After the magazine floor plate has been removed from the magazine housing, the magazine locking plate, the magazine follower spring, and the magazine follower (Part 53, Figure 3) with its insert (Part 54, Figure 3) are removed. The magazine follower insert is removed from the magazine follower by inserting the tip of a screw driver under the tab of the insert and turning the screw driver in a clockwise direction.

## 3. Assembly

**3.1 Magazine.** Magazine assembly is accomplished in the reverse order of its disassembly. The magazine follower insert is pressed back onto the magazine follower with the finger. The tongues on the magazine follower with its insert are aligned with the grooves in the magazine housing, and the entire assembly is dropped into the housing which is held upside down. Following this, the magazine spring is inserted. The slot on the magazine locking plate is inserted into the magazine follower spring, and the spring is depressed. Depress the magazine follower spring by pushing down on the magazine locking plate with a thumb. The spring, however, should not be compressed any further below the lips of the magazine housing than is required to slide on the magazine floor plate. Fully seat the button on the bottom of the magazine locking plate into the floor plate to complete magazine assembly.

**3.2 Barrel and Receiver Group.** The barrel and receiver group is assembled as follows:

***3.2.1 Trigger Guard Cover.*** The trigger guard cover catch is aligned with its hole in the receiver housing frame and snapped into position with slight finger pressure.

***3.2.2 Disassembly Button, Disassembly Button Spring, and Disassembly Button/Front Sight Pin.*** Put the disassembly button spring into its position in the receiver housing, insert the disassembly button into its recess, and insert the disassembly button/front sight pin.

***3.2.3 Cocking Lever Stop Pins and Cocking Lever Spring.*** The cocking lever spring is placed in its proper position in the receiver frame, aligned with the hole in the frame, and the first cocking lever stop pin is inserted. This is followed by the insertion of the second cocking lever stop pin. If the first cocking lever stop pin also has been removed, it is reinserted into its hole in the receiver frame.

***3.2.4 Cocking Latch, Cocking Latch Spring, Cocking Lever Stop, Rocker, Magazine Catch, Magazine Catch Spring and Locking Pin.*** The cocking latch, cocking latch spring, cocking lever stop, rocker, magazine catch, magazine catch spring are placed into their proper positions in relationship to the receiver and aligned using a punch or assembly pin to hold the parts in place. The locking pin then is inserted. This is done by laying the pistol with its muzzle pointed to the operator's left; inserting the cocking latch spring into the hole of the cocking latch, and then placing these parts into their hole in the receiver frame. After completion of this step, hold the parts in place so that the hole in the rear of the cocking latch is aligned with the hole in the receiver. The cocking lever stop then is placed on top of the cocking latch, making sure that the bottom of the cocking lever stop is riding on the second cocking lever stop pin previously assembled and that the top hole in the cocking lever stop is aligned with the hole of the cocking latch. At this point, ensure that the cocking latch spring has not moved. This may be done by pushing up and down on the cocking latch to ensure resistance. Place the magazine catch and the magazine catch spring in alignment with the locking pin hole in the receiver frame. Lay the rocker in its proper position on the receiver with its triangular knobs facing up and down and its point facing forward. Align the rocker hole with the locking pin hole in the receiver frame and insert the locking pin. Tap the locking pin into place, making sure that it is firmly seated in its hole to retain the rocker. Prior to proceeding further, check to ensure that the cocking latch, cocking latch spring, magazine catch, and magazine catch spring are functioning properly and the cocking lever stop is firmly secured.

***3.2.5 Locking Pin, Slide Stop, and Slide Release Spring.*** The slide release spring and slide stop are placed in proper relationship to one another as shown in Figure 3. The locking pin then is inserted to retain these parts. This is done by first placing the hole in the slide stop spring in alignment with the locking pin hole in the receiver's frame and partially inserting the locking pin. The long crooked arm of the spring is placed in front of the rocker, and the hole at the point of the slide stop is placed on the slide stop/disconnector pin. The catch near the interior angle of the slide stop secures the straight arm of the spring. Holding these parts in position, the long crooked arm of the slide release spring is moved with a punch to its position on the rear side of the rocker. The locking pin is now inserted fully.

***3.2.6 Disconnector.*** With the muzzle emplaced on a table and pointed to the operator's right, place the hole in the disconnector over the slide stop/disconnector pin.

***3.2.7 Trigger Bar, Trigger, Trigger Return Spring, and Trigger and Grip Pin.*** Attach the trigger bar to its knob on the trigger and emplace the trigger and trigger return spring in proper relationship to one another. When this has been done, place the trigger and grip pin in the hole of the trigger only sufficiently enough to retain the spring which must be engaged over the top of the trigger, slide the entire assembly onto the frame and into its proper position, and seat the trigger and grip pin fully into its hole in the receiver. When this assembly is completed, check to ensure that the trigger spring returns the trigger by being properly engaged with the inner knob of the trigger bar.

***3.2.8 Sear Lever.*** Emplace the sear lever, ensuring that the sear rides on top of the receiver's frame.

***3.2.9 Cocking Lever, Cocking Grip, and Cocking Lever and Grip Pin.*** Place the long arm of the cocking lever spring against the upper rear surface of the cocking lever. Compress the cocking lever and its spring so that the cocking lever hole is over the rounded knob on the side of the sear lever with its tip riding in the same slot as the sear while the cocking lever is engaged under the cocking latch. When the long arm of the cocking lever spring is almost fully compressed, place the upper tip of the cocking grip into its recess on top of the cocking lever with an upward motion that compresses the short arm of the cocking lever spring. After making these alignments, compress the entire assembly, align the cocking lever spring pin holes and insert the cocking lever and grip pin with the aid of a punch. Following this assembly, check to ensure that the cocking grip will depress by squeezing it. If it will not depress, the cocking lever has slipped in front of the cocking latch. This can be prevented, by ensuring that both the cocking lever and cocking grip are depressed during assembly operations.

***3.2.10 Sear Lever Spring.*** Thread the sear lever spring through the hole on the raised knob on the top side of the cocking lever. With a punch engage the spring's arm around the raised notches on the top of the cocking and sear levers.

***3.2.11 Stocks.*** Slide the lips on the rear of the stocks under the forward projections of the receiver frame and snap them into position with the thumbs; emplace the stock screws with their lock retainers and tighten.

***3.2.12 Recoil Spring.*** Place the recoil spring over the barrel.

**3.3 Assembly of the Slide.**

***3.3.1 Piston.*** If removed, the piston locking spring, bolt compression, and piston retaining pin are replaced in the piston. The piston is attached to the slide by drifting the piston locking pin into its position noting that it does not protrude from either side.

***3.3.2 Extractor, Extractor Detent and Extractor Spring.*** Place the extractor spring in its hole in the rear of the extractor slot followed by the extractor detent. The small end of the extractor detent is toward the spring. Place the extractor in the slot and press down and to the rear until it snaps into position.

***3.3.3 Front and Rear Sights.*** The front and rear sights are replaced by drifting the sights into their respective recesses. Once aligned, the pin is drifted into the front sight and the screw is inserted and tightened in the rear sight.

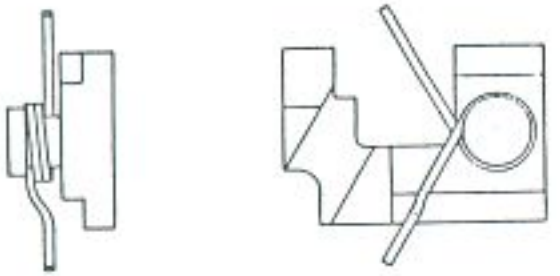
***3.3.4 Firing Pin Block and Firing Pin Block Spring.*** To replace the firing pin block and firing pin block spring, the spring is mounted as shown in Figure 11. The shanks of the spring are compressed between the thumb and forefinger, and the spring is placed over the rounded knob that is an integral part of the firing pin block. The firing pin block and spring are inserted into their position in the slide. Depress the cropped shank of the firing pin block spring and press it under its locking flange.

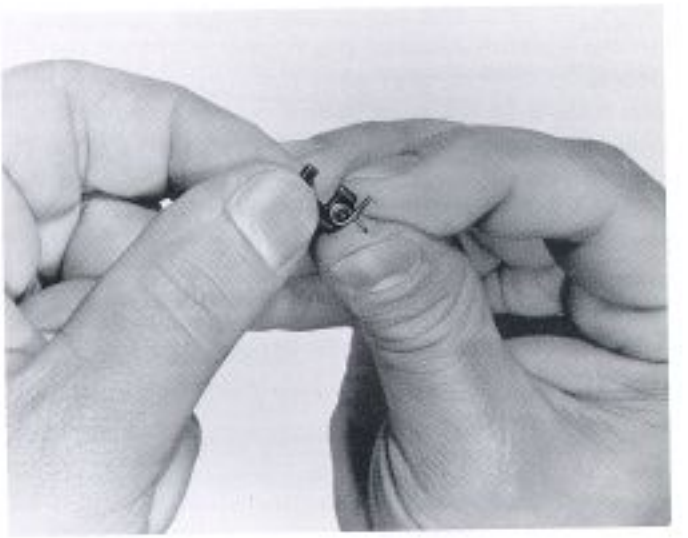
***3.3.5 Firing Pin Assembly.*** Assemble the firing pin rebound spring, main spring, ring, and insert the ring pin. Align the slot in the firing pin retainer with the firing pin pawl and slide onto the firing pin. Depress the firing pin retainer until it can be rotated to seat the firing pin pawl. Align the firing pin assembly with its recess in the slide and push into place. Place the thumb on the firing pin retainer and rotate counterclockwise until the assembly snaps into position.

**3.4 Assembly of the Groups**

***3.4.1 Slide.*** The slide is placed on the receiver by pulling it to the rear and engaging it to the barrel and receiver group. If the slide does not fit onto the receiver, the stocks have not been fully seated.

***Figure 11.*** *Replacing the firing pin block and spring.*





***3.4.2 Magazine.*** The magazine is placed into its recess, and the weapon is completely re-assembled.

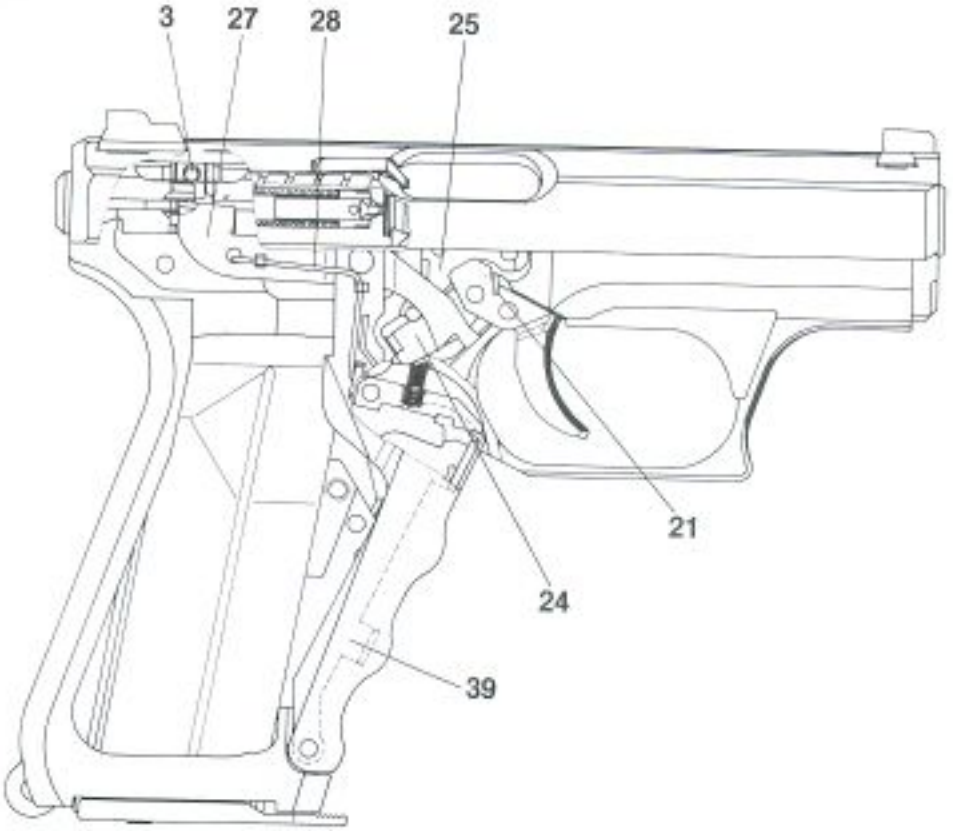
## 4. Functioning

**4.1 Steps.** There are four (4) distinct steps in the functioning of the H&K Pistol P7M13. They are as follows.

***4.1.1 First Step—Weapon Loaded and Uncocked.*** When the H&K Pistol P7M13 is loaded with a magazine and a round is seated in its chamber, the weapon is in the first step of its functioning. Its various parts are in the positions depicted in Figures 12 and 13. The pistol's slide is closed with the face touching the base of the cartridge seated in the weapon's chamber, but the pistol still is fully safe. This is due to the firing pin rebound spring (12) holding the firing pin (14) in the rest position while the cocking lever spring (47) also holds the cocking lever (39) in its forward position. Until deliberate pressure is applied against the cocking grip (38) by the operator, the cocking lever will not allow the sear lever (27), under pressure of the sear lever spring (28), to pivot down and disengage the sear. The sear lever therefore remains in contact with the receiver and positioned in front of the firing pin cocking pawl, preventing discharge of the weapon as the firing pin cannot engage the cap of the cartridge seated in the weapon's chamber. The firing pin block (3) also provides a further positive safety. All safety features are retained until pressure is applied to the trigger.

***4.1.2 Second Step—Weapon Loaded and Cocked.*** Deliberate hand pressure on the cocking grip (38) causes the H&K Pistol P7M13 to cock. When this is done, the pistol is in its second step of functioning as depicted in Figure 14. In this step of the

***Figure 12.*** *First step of functioning, H&K Pistol P7M13 (right side view).*




weapon's functioning, the cocking lever (39) is pressed back by the cocking grip (38). The cocking latch (45) then engages and holds the cocking lever in place as the sear lever (27) is in front of the release edge of the trigger bar (24). When the sear lever moves back, it overcomes the tension of the firing pin spring (13) and prepares the weapon for aiming and firing.

***4.1.3 Third Step—Weapon Fired.*** Rearward finger pressure against the trigger (22) pivots the sear lever (27) clear of the pawl on the firing pin (14). This pivoting movement of the sear lever also pulls down the firing pin block (3), to allow the firing pin to move foreward under the pressure of the firing pin spring (13). The tip of the firing pin hits the primer in the base of the cartridge seated in the weapon's chamber, and the piece is fired. Positions of the pistol's component parts after firing are shown in Figure 15. Recoil has overcome the pressure of the recoil spring (Part 35, Figure 3), and the slide has moved to the rear. In this moment, the empty cartridge case is extracted from the chamber and ejected from the weapon by the forward edge of the tip of the slide stop. When recoil is expended, the tension of the recoil spring moves the slide to the front. As it moves forward, the face of the bolt picks up a new round forced upward by pressure of the magazine follower spring on the follower, and the new round is seated in the chamber as the slide fully closes.

***4.1.4 Fourth Step—Weapon After Firing Last Round.*** When the last round in a magazine loaded into the H&K Pistol P7M13 has been fired, the magazine follower (53), pushed upward by the magazine follower spring (55), reacts against the slide stop (26) to hold the slide (1) to the rear as shown in Figure 16. To return the pistol to an unloaded and uncocked position, pressure is applied to the cocking grip (38). As the cocking grip moves to the rear, the rocker (41) is rotated by the nose on the cocking lever (39). This pivots the slide stop down out of the position to hold back the slide. The slide then moves forward under pressure of the tensioned recoil spring (Part 35, Figure 3), and the firing pin (14) again is cocked by the sear lever.

***Figure 13.*** *First step of functioning, H&K Pistol P7M13 (left side view).*

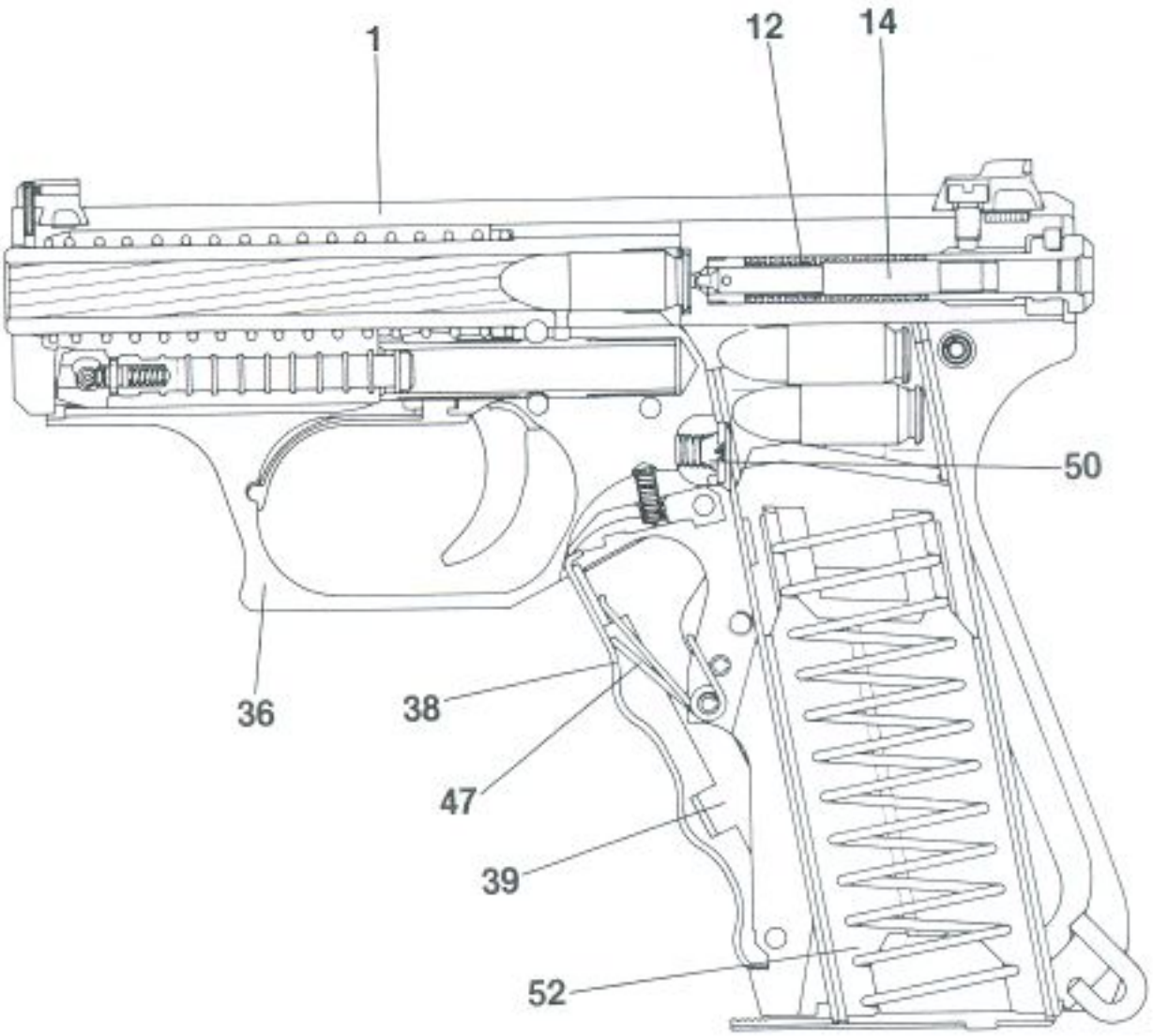


***Figure 14.*** *Second step of functioning, H&K Pistol P7M13 (loaded and cocked).*

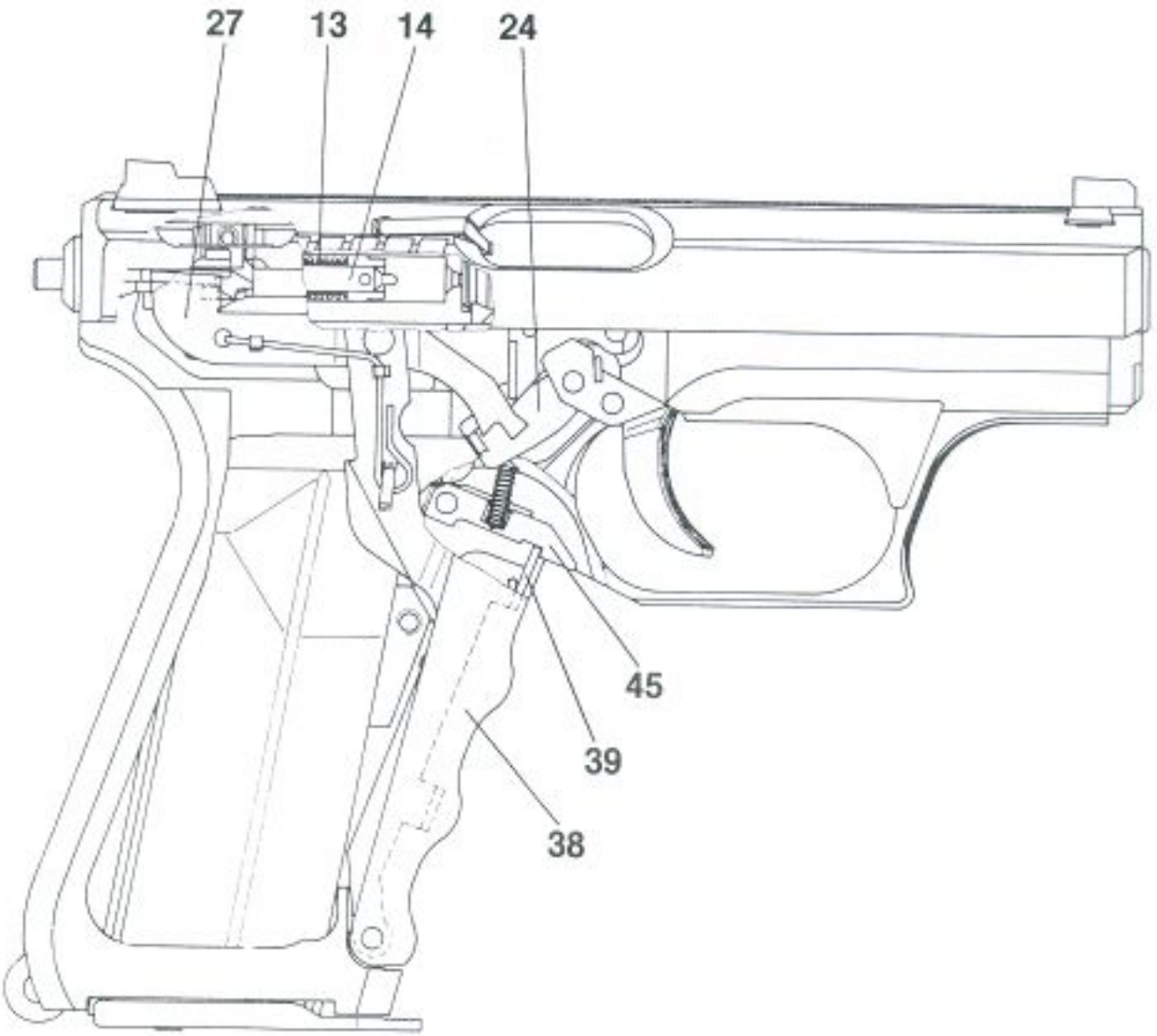


***Figure 15.*** *Third step of functioning, H&K Pistol P7M13 (pistol after firing).*

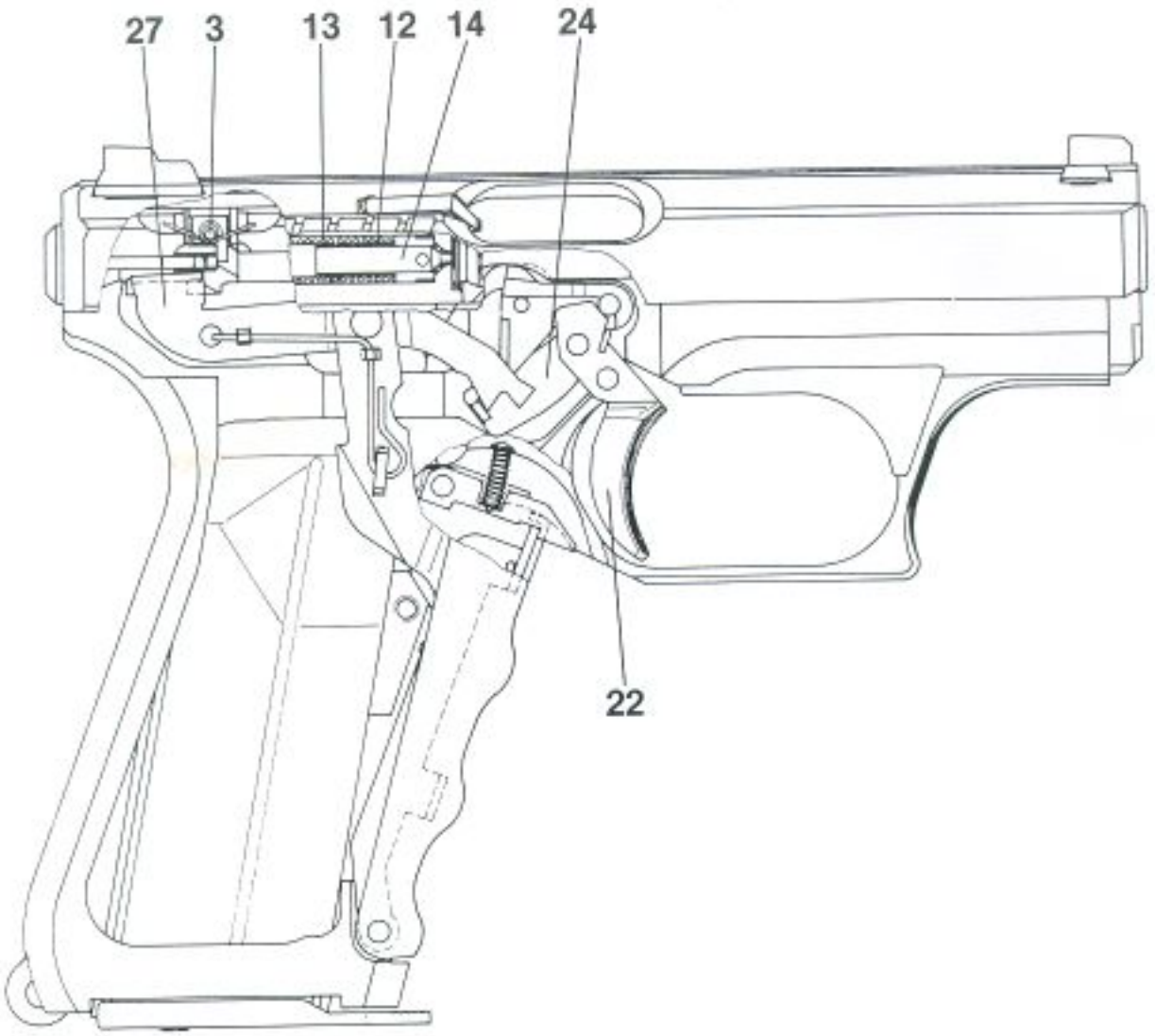
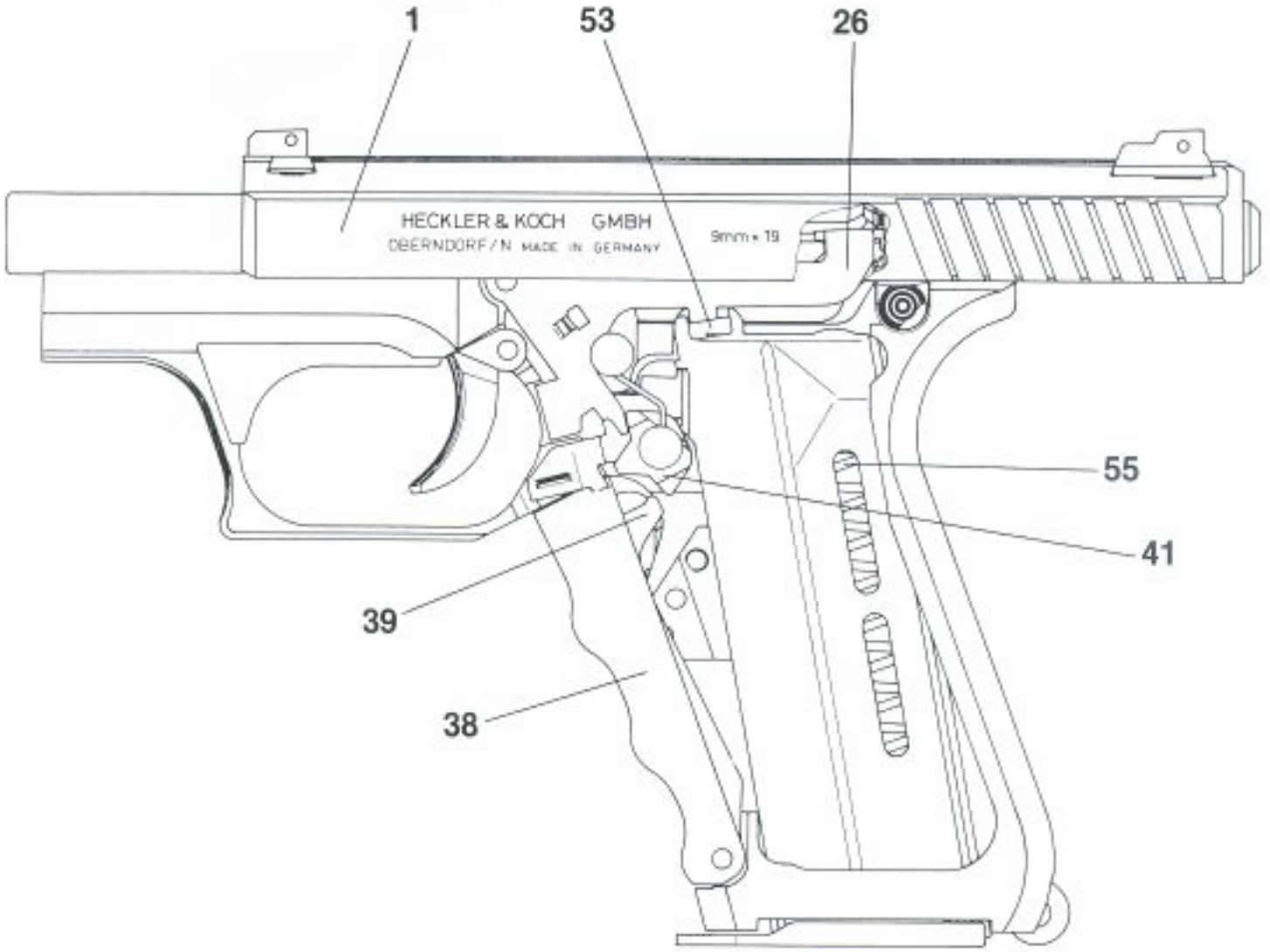


***Figure 16.*** *Fourth step of functioning, H&K Pistol P7M13 (pistol after firing of last round).*



## 5. Trouble Shooting

**5.1 General.** In the event of a malfunction, the pistol must be treated as if it is loaded until it has been cleared.

**5.2 Immediate Action.** Most malfunctions will be eliminated by the application of immediate action procedures designed to overcome stoppages. These stoppages and appropriate corresponding immediate actions for eliminating them are:

***5.2.1 Failure to Feed.*** A failure to feed a new cartridge into the pistol's chamber most often stems from the magazine not being fully seated. Immediate action to remedy this condition consists of tapping the bottom of the magazine with the palm of the non-shooting hand, cocking the piece, reaiming the pistol, and refiring the weapon.

***5.2.2 Failure to Eject.*** A failure to eject a fired cartridge case may stem from a short recoil stroke of the slide. Immediate action to remedy this condition consists of pulling the slide fully to the rear, releasing it, and seating a new round in the weapon's chamber.

***5.2.3 Failure to Extract.*** Complete failures to extract on the H&K P7M13 results only from a broken extractor, but a ruptured cartridge may cause the new next round to be fed only partially into the chamber. In the event that a round fails to be seated in the chamber, look to see if this has happened. When this occurs, push the magazine catch and release the magazine from its housing; pull the slide and remove the ruptured cartridge by pulling the slide fully to the rear several times or using a ruptured cartridge case extractor.

**5.3 Other Stoppages.** Other common types of malfunctions, their causes, and remedies are as follows:

***5.3.1 Failures to Fire.*** Causes and immediate action procedures for failures to fire are as follows:

**5.3.1.1 Cause.** Ammunition failure (misfire).

**5.3.1.2 Remedy.** Keep the pistol pointed down range, and away from any objects the firer does not intend to shoot. Ease off pressure on the cocking grip, squeeze it again to recock the piece, reaim, and refire. If the round still fails to fire, manually feed a new round into the chamber and fire the weapon again.

**5.3.1.3 Cause.** Disengagement of the firing pin block spring.

**5.3.1.4 Remedy.** Engage firing pin block spring and check its functioning.

**5.3.1.5 Cause.** Broken firing pin retainer or firing pin.

**5.3.1.6 Remedy.** Replace with new parts.

***5.3.2 Slide Fails to Open After Round is Fired.*** Cause and remedy for failure of the slide to open after firing is as follows:

**5.3.2.1 Cause.** Cartridge jams in the chamber due to distorted case or fouled chamber.

**5.3.2.2 Remedy.** Clear the pistol by pulling back the slide manually and removing the empty cartridge case. Check the slide's freedom of movement. If it is fouled, clean the pistol.

***5.3.3. Cartridge Case Fails to Eject.*** Cause and remedy for failures of cartridge cases to eject after firing is as follows:

**5.3.3.1 Cause.** Insufficient slide recoil.

**5.3.3.2 Remedy.** Clear the pistol by pulling back the slide manually and removing the empty cartridge case. Check the slide's freedom of movement. If it is fouled, clean the pistol.

***5.3.4 Failure to Feed.*** Causes and remedies for a failure to feed are as follows:

**5.3.4.1 Cause.** Chamber or piston flutes are fouled.

**5.3.4.2 Remedy.** Unload and clear the weapon. Clear piston flutes and the chamber of the pistol.

**5.3.4.3 Cause.** Cartridge distorted.

**5.3.4.4 Remedy.** Replace cartridge.

**5.3.4.5 Cause.** Recoil spring weakened or damaged.

**5.3.4.6 Remedy.** Replace recoil spring.

5.3.4.7 **Cause.** Weak or broken magazine follower spring.

5.3.4.8 **Remedy.** Replace magazine follower spring.

5.3.4.9 **Cause.** Damaged or broken magazine or magazine lips.

5.3.4.10 **Remedy.** Replace magazine.

***5.3.5 Slide Failure to Remain Open After Last Round Fired.*** Causes and remedies for slide failure to remain open after the last round in a magazine has been fired are as follows:

5.3.5.1 **Cause.** Weak or broken magazine follower spring.

5.3.5.2 **Remedy.** Replace magazine follower spring.

5.3.5.3 **Cause.** Broken or damaged slide stop or slide release spring.

5.3.5.4 **Remedy.** Replace damaged or broken part.

5.3.5.5 **Cause.** Magazine follower fouled.

5.3.5.6 **Remedy.** Clean follower and magazine.

***5.3.6 Slide Failure to Snap Forward.*** Cause and remedy for slide failure to snap forward when cocking grip is squeezed is as follows:

5.3.6.1 **Cause.** Unhinged, damaged, or broken slide release spring.

5.3.6.2 **Remedy.** Replace slide release spring.

***5.3.7 Firing Pin Failure to Cock.*** Causes and remedies for firing pin failure to cock are as follows:

5.3.7.1 **Cause.** Firing pin block spring disengaged, damaged, or broken.

5.3.7.2 **Remedy.** Engage firing pin block spring or replace it if damaged or broken.

5.3.7.3 **Cause.** Twisted cocking lever or sear lever.

5.3.7.4 **Remedy.** Replace cocking lever or sear lever.

5.3.7.5 **Cause.** Sear lever spring disengaged.

5.3.7.6 **Remedy.** Engage sear lever spring.

5.3.7.7 **Cause.** Firing pin or firing pin retainer damaged or broken.

5.3.7.8 **Remedy.** Replace firing pin or firing pin retainer.

5.3.7.9 **Cause.** Ring or ring pin broken or damaged.

5.3.7.10 **Remedy.** Replace ring or ring pin.

***5.3.8 Firing Pin Fails to Snap.*** Causes and remedies for firing pin failure to snap are as follows:

5.3.8.1 **Cause.** Broken trigger bar, trigger return spring, or trigger.

5.3.8.2 **Remedy.** Replace trigger, trigger return spring, and/or trigger bar.

5.3.8.3 **Cause.** Broken or damaged cocking lever, sear lever, or disconnector.

5.3.8.4 **Remedy.** Replace cocking lever, sear lever, and/or disconnector.

***5.3.9. Change of Bullet Impact Point.*** Causes and remedies for change of bullet impact point are as follows:

5.3.9.1 **Cause.** Rear or front sight misaligned.

5.3.9.2 **Remedy.** Adjust rear sights or remove and replace front sight pin and adjust or replace front sight (See paragraph 2.2.3 above).

## 6. Care and Cleaning

**6.1 Responsibility.** The user (firer) is responsible for the care, cleaning, and condition of the H&K Pistol P7M13 at all times. Defects and malfunctions are reported to the unit's armorer, or commercial weapons are returned

to HK Inc. for maintenance. In military units, the armorer is responsible for replacement or repair of defective parts, maintaining and accounting for replacement parts in accordance with prescribed supply procedures, and forwarding unit weapons to his direct support unit for any required maintenance beyond his capabilities. In the event of breakage, Beta lights (Part 61, Figure 3) on sights (items available only on H&K P7M13 commercial models) will be replaced by HK, Inc. under terms of the pistol's warranty or at nominal cost.

**6.2 Tools and Materials.** Commercial tools and materials for the care and cleaning of the H&K Pistol P7M13 are shown in Figure 17. U.S. Government issue cleaning materials equally are acceptable for the maintenance of this pistol. However, no metallic objects; synthetic materials, e.g., nylon or Perlon cloth (when the weapon is hot from firing); chemical solvents, e.g., petroleum ether; or cold or hot water should be used on this weapon. In addition to materials depicted in the kit at Figure 17, the following materials also may be used in the care and cleaning of th H&K Pistol P7M13.

***6.2.1 Cleaning Rags.*** Except as noted for synthetic materials above, cleaning rags may be used as required.

***6.2.2 Petroleum.*** Except as noted above for petroleum ether products, petroleum may be used in the care and cleaning of the H&K Pistol P7M13 as required.

***6.2.3 Gun Oil or Grease.*** Gun oil or grease that is free of chlorine and acids may be used to clean the H&K Pistol P7M13.

***6.2.4 Chip of Wood.*** A chip of wood may be used in the care and cleaning of the H&K Pistol P7M13 for assembly, disassembly, or rubbing off carbon.

**6.3 Ordinary Cleaning and Lubrication.** The H&K Pistol P7M13 is cleaned following each use by the user (firer). For this purpose, the pistol is disassembled as far as it is necessary to clean all fouled parts. Disassembly, however, normally is not required beyond the three main groups of the weapon. The extent of the weapon's disassembly nevertheless will depend on the number of rounds fired and the compound of the propellant in the ammunition used during firing. In routine cleaning operations, the various parts of the pistol are treated as follows:

***6.3.1 Slide.*** The slide of the pistol is cleaned with a brush or cloth and then lightly lubricated with oil.

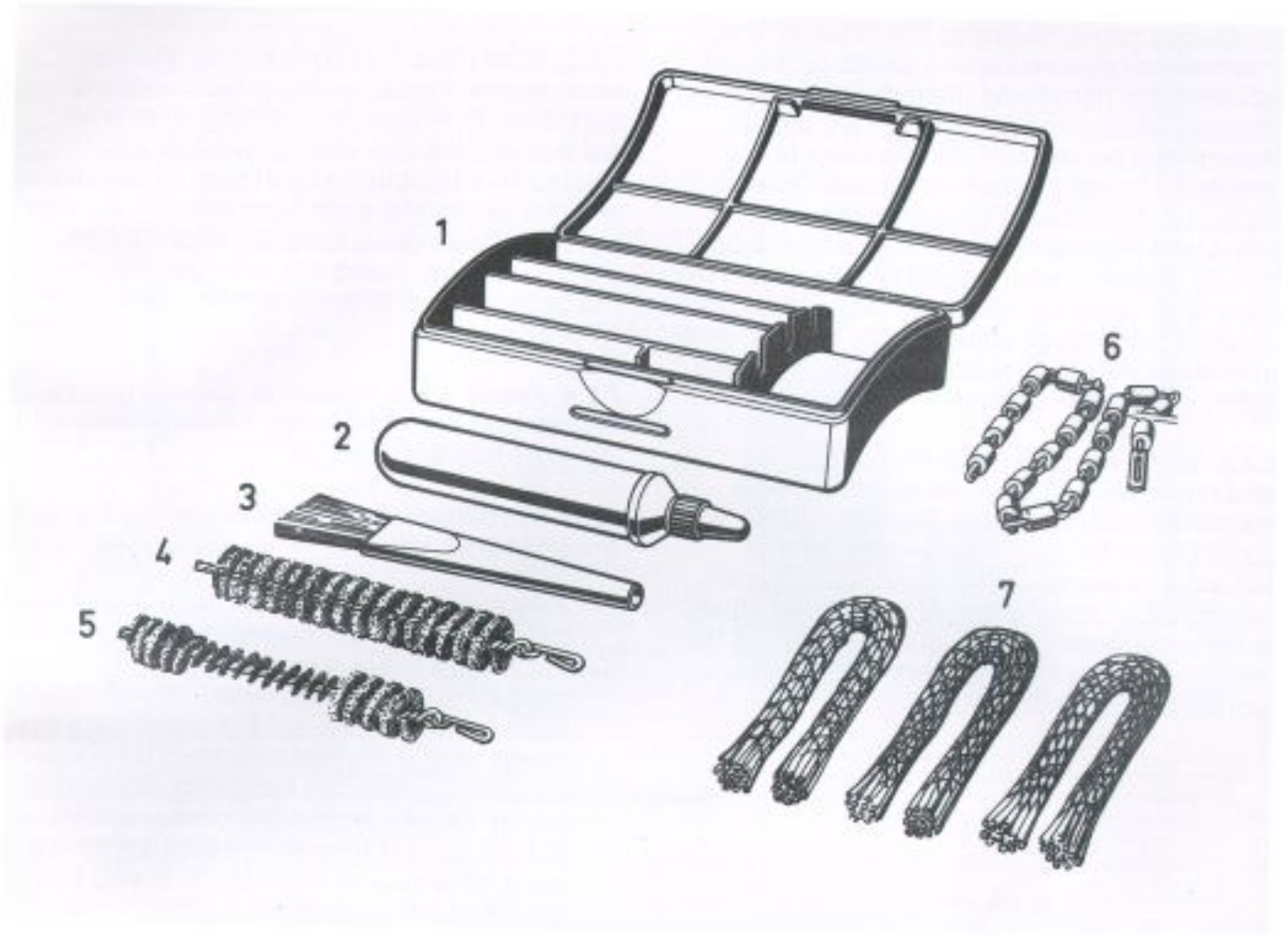
***6.3.2 Receiver and Barrel.*** The barrel is cleaned by pulling a brush, patches, or wicks through it with the pull-through HK chain or a U.S. Government normally issued cord. All brushes, patches, or wicks are pulled clean through from the weapon's chamber to its muzzle. Initial bore cleaning should be done as soon after firing as possible while the barrel is still warm to the touch. Cleaning with brushes, patches, or wicks continues until no dirt is shown on a patch or wick. Other parts of the barrel and receiver group are cleaned with brushes and cloths. Both the inside and outside of the barrel is then lightly oiled. Cleaning of the bore is repeated on each of three days after firing.

***6.3.3 Magazine.*** Following normal use, dirt and impurities are removed from magazine lips and the follower with brushes and cloth. If the magazine has been subjected to sand and other dirt, it is disassembled and thoroughly cleaned. Following all cleaning operations, the magazine and all its parts are lightly lubricated.

**6.4 Thorough Cleaning.** While the degree of fouling of the H&K Pistol P7M13 and the extent of its normal cleaning depends on the number of rounds fired in the weapon and the compound of the propellant in used ammunition, a thorough cleaning of the weapon is required at regular intervals of not less than one year and/or after firing 1,000 rounds. Such cleaning operations are conducted on the various major assemblies of the H&K Pistol P7M13 as follows:

***6.4.1 Slide.*** Rinse the slide of the H&K Pistol P7M13 in petroleum and clean it thoroughly with a brush and cloths to remove all dirt and impurities; wipe the slide with a dry cloth, and lightly lubricate it. Never use hard objects to clean the slide as they may destroy its finish. The firing pin block spring normally is not removed from the firing pin block as its spring could be damaged or distorted. When the firing pin block and its spring are being cleaned with a brush, care should be exercised to prevent bristles from becoming stuck to the firing pin block as they may cause these parts to stick during firing. It is not necessary to disassemble the piston assembly to clean it. The

***Figure 17.*** *Cleaning kit, H&K Pistol P7M13.*




*1 Storage Case*
*2 Oiler*
*3 Cleaning brush*
*4 Oil brush*
*5 Cleaning brush*
*6 Pull-through chain*
*7 Cleaning wick*

piston may be thoroughly cleaned with a cloth and lightly lubricated. Never use sharp edges to clean the front section of the piston as they may damage it. Powder residue between piston rings should be allowed to remain as it does not affect operation of the weapon since the piston is self-cleaning during firing. Firing pin assemblies, however, are disassembled during thorough cleaning operations. For this disassembly, the thumb is used to rotate the firing pin retainer and detach the firing pin assembly from the slide. The firing pin assembly is washed in petroleum, dried, lightly lubricated, and reassembled.

***6.4.2 Barrel and Receiver.*** The piston cylinder is cleaned in a similar manner to the barrel using a brass brush. The brush is screwed up and down the inside walls of the cylinder prior to being soaked. After brushing, tap the

receiver barrel end down several times on a flat surface to remove the carbon from inside the cylinder. Other moving parts of the receiver group are soaked in petroleum, dried, and lightly oiled. The barrel also is cleaned with brushes, patches, and/or wicks soaked in oil, During barrel cleaning, the flutes of the chamber are cleaned with a brass brush and oil. After the barrel and chamber have been cleaned, oiled wicks or patches are pulled through the barrel from the chamber to its muzzle to lightly lubricate the bore. Outside surfaces of the barrel also are lightly lubricated. Following initial cleaning, the barrel and chamber are cleaned for the next three days after firing by pulling a brush, wicks, or patches from the chamber to the muzzle until they show no dirt. The bore and chamber are lightly oiled after each cleaning operation.

***6.4.3 Magazine.*** The magazine should be disassembled with care as bending of the magazine follower spring (Part 55, Figure 3) could cause failure to feed—problems by varying the tension of that spring. Its component parts are washed in petroleum; all dirt is removed, especially from the interior of the magazine's lips; the parts are dried; lightly lubricated; and reassembled.

## 7. Inspections

**7.1 When.** Inspections are conducted after all thorough cleaning operations or repairs.

**7.2 How.** Upon completion of weapon assembly, the H&K Pistol P7M13 is inspected in the following steps:

***7.2.1 First Step.*** The slide is pulled to the rear, snapped forward, and the trigger is pulled to check the overall functioning of the weapon.

***7.2.2 Second Step.*** The magazine catch is disengaged, and the magazine is allowed to fall free of the receiver. It is checked visually to ensure that it is in serviceable condition and that its lips are not bent. The magazine locking plate is checked to ensure that it is fully engaged. The magazine then is loaded to its full capacity with thirteen (13) dummy rounds, checked to ensure that a free space remains in the magazine below the last dummy cartridge, and inserted into the receiver to ensure that loading and insertion operations take place in a trouble free manner with the magazine being fully retained by its catch.

***7.2.3 Third Step.*** Pull the slide all the way back several times, letting it snap forward each time to ensure that dummy cartridges are fed into the chamber, extracted, and ejected in a trouble free manner. To determine whether or not the slide is retained in its rear position, these operations are repeated until the last dummy round has been loaded into the chamber, extracted therefrom, and ejected.

***7.2.4 Fourth Step.*** Press the cocking grip to ensure that the slide snaps forward freely into its most forward position.

***7.2.5 Fifth Step.*** Use gauges 9224 L2-L5 (Figure 18) as follows:

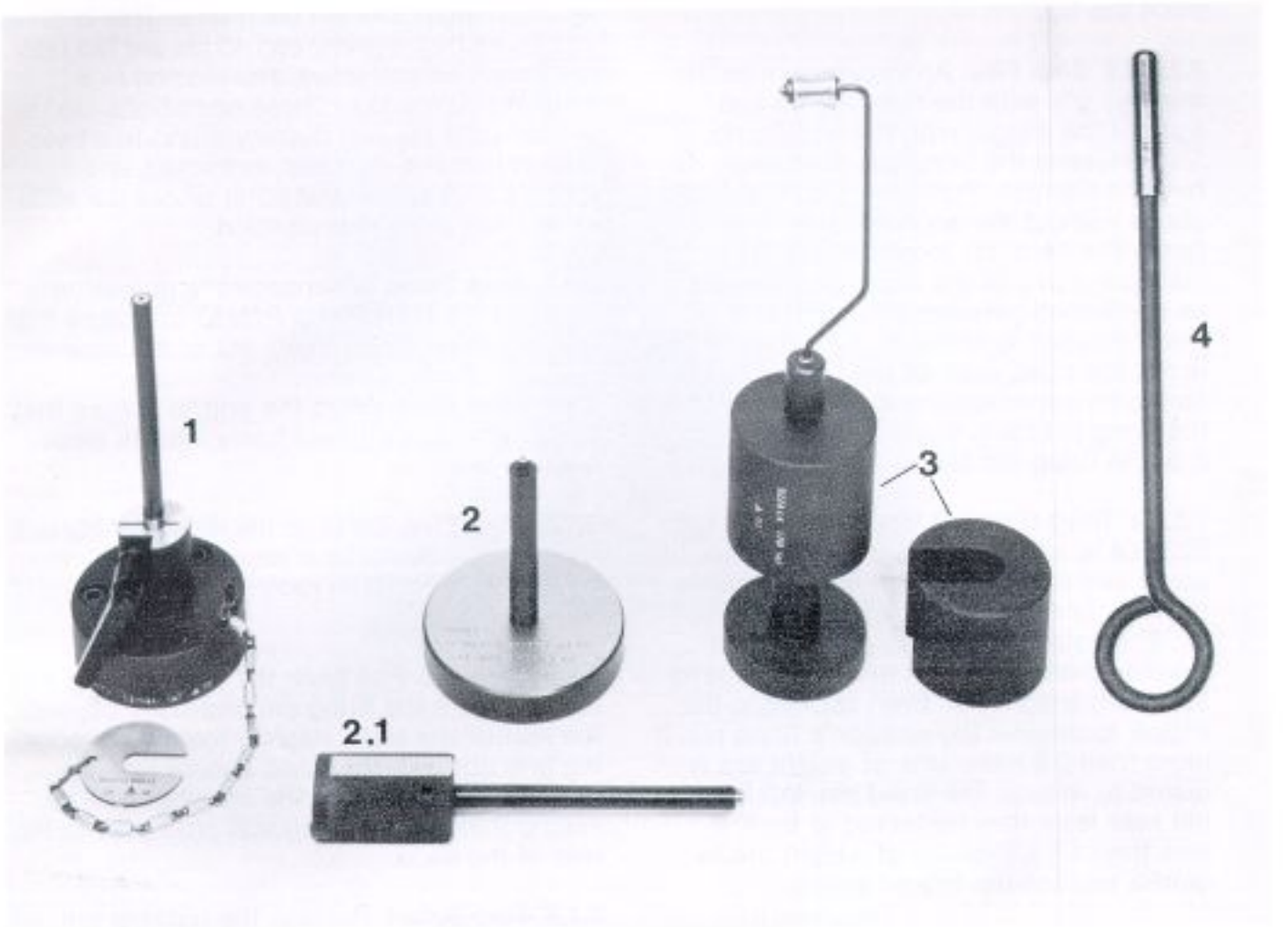
**7.2.5.1 First Gauging Operation.** Use gauge 9224 L-2 to check the functioning of the disconnector. This is done by inserting the gauge into the barrel with its clamping lever released. Depress the pistol onto the gauge until the muzzle touches its space plate. While keeping the pistol depressed on the gauge, tighten the clamping lever of the gauge and remove the gauge's space plate. This retains the slide in a slightly unlocked position where a properly functioning disconnector will have pressed the trigger bar out of the way of the sear lever to prohibit firing pin movement—a positive safety feature. If a gauge is not available, this operation also may be conducted by placing the slide on the edge of a work bench or table and pushing slightly down on the slide to achieve the same effect as with a gauge. Squeeze the cocking grip and pull the trigger. If the firing pin snaps forward, the disconnector is broken or it has been assembled improperly.

**7.2.5.2 Second Gauging Operation.** Inspection of the safety and the firing pin front and rear protrusions are made with gauge 9224 L3 in the following manner:

***7.2.5.2.1 Step One.*** Unscrew the right grip from the receiver.

***7.2.5.2.2 Step Two.*** Pull the slide to the rear with one hand while depressing the

***Figure 18.*** *Gauging Equipment*




| *Item* | ***Designation*** | ***Drawing No.*** | ***Ident. No.*** |
|---|---|---|---|
| *1* | *Inspection gauge for disconnector function* | *9224 L 2* | *323 779* |
| *2* | *Inspection gauge for firing pin protrusion* | *9224 L 3* | *323 772* |
| *2.1* | *Depth gauge for L3* | | |
| *3* | *Inspection gauge for trigger pull* | *9224 L 4* | *323 782* |
| *4* | *Calibre plug gauge* | *9224 L 5* | *324 242* |

disassembly button with the other to disengage the slide and remove the right grip.

***7.2.5.2.3 Step Three.*** Take up the normal slack distance of the trigger. With the trigger slack held, place the pistol so that its muzzle is pointed in the air. With the weapon and its parts still remaining in these positions, place the firing pin retainer on the 9224 L3 inspecting gauge and press down on the pistol until the firing pin retainer can be depressed no further (Figure 19).

***7.2.5.2.4 Step Four.*** With the pistol continuing to be held in the position described in Step Three, insert the depth gauge portion of gauge 9224 L3 into the barrel and push it down as far as it will go without the application of force. The centrally

located movable measuring peg of the gauge must be even with the lower surface of the end of the depth gauge (Figure 20). If this is not the case, the ring may be defective, allowing the firing pin to protrude too far.

7.2.5.2.5 ***Step Five.*** Apply pressure to the cocking grip with the right thumb and against the trigger with the left thumb. This releases the firing pin to move to its forward position. Push down on the depth gauge without the application of undue force. The centrally located movable measuring peg of the depth gauge must be positioned between the upper and lower measuring levels of the gauge. If this is not the case, inspect the firing pin spring for serviceability. If it is serviceable, the firing pin most likely is worn. Replace it or the firing pin spring as applicable.

7.2.5.3 **Third Gauging Operations.** Gauge 9224 L4 is used to measure trigger pull. Its upper arm is placed over the trigger while the muzzle of the pistol is pointed in the air. The cocking grip is depressed, and weights then are added to the gauge until sufficient weight has been applied to the trigger to release the weapon's firing pin. If more than 2.9 kilograms of weight are required to release the firing pin, the firing pin sear lever may be burred or bent. If less than 1.8 kilograms of weight are required, replace the trigger spring.

7.2.5.4 **Fourth Gauging Operation.** Gauge 9224 L5 is used to determine the caliber of the barrel. If the bore is not within Government prescribed limits for 9mm weapons, the barrel of the pistol must be replaced.

## 8. Operational Testing

8.1 **Steps.** Operational testing of the H&K Pistol P7M13 is conducted as follows:

8.1.1 **Step One.** Load the magazine to its full capacity with thirteen (13) dummy rounds, insert it into the receiver, and ensure that loading and insertion operations are performed in a trouble free manner with the magazine being fully retained by its catch.

***8.1.2 Step Two.*** Pull the slide of the H&K Pistol P7M13 all the way back several times, letting it snap forward each time. This is done to ensure that dummy cartridges are fed into the chamber, extracted, and ejected in a trouble free manner. These operations are repeated until the last dummy round has been loaded into the chamber, extracted, and ejected to determine whether or not the slide is retained in its rear position.

***8.1.3 Step Three.*** Disengage the magazine catch of the H&K Pistol P7M13 to ensure that the magazine drops freely out of the receiver.

***8.1.4 Step Four.*** Press the grip to ensure that the slide snaps forward freely into its most forward position.

***8.1.5 Step Five.*** Press in the disassembly button and pull back the slide all the way, detaching it from the receiver. Reattach the slide and continue.

***8.1.6 Step Six.*** Pull back the cocking grip and look to see if the firing pin protrudes beyond the rear of the slide. Slightly loosen the cocking grip about 3-4mm and ensure that the cocking latch engages the cocking lever by seeing that the firing pin still protrudes to the rear of the slide.

***8.1.7 Step Seven.*** Release the cocking grip all the way and look to see that the firing pin has disappeared into its slide recess.

***8.1.8 Step Eight.*** Squeeze the cocking grip and pull the trigger to ensure that the firing pin snaps forward.

## 9. Barrel Replacement

Barrels of H&K Pistols P7M13 may be replaced by direct support maintenance units, or by HK, Inc. in the case of commercial models. To disassemble the barrel from the receiver, the slide stop/disconnector pin (Part 59, Figure 3) is drifted out and the barrel is

***Figure 19.*** *Inspection of firing pin rear protrusion.*

***Figure 20.*** *Inspection of firing pin front protrusion.*

removed by driving out the barrel with another old salvaged barrel and a hammer. To place a new barrel on the receiver, align the notch in the barrel with the extractor notch in the receiver, place the pistol in a vise with its parts protected by cloth (Figure 21), press the barrel into place so that the slide stop/disconnector pin hole in both the barrel and receiver are aligned, and insert the slide stop/disconnector pin. In lieu of a vice, a block of wood and a hammer may be used to drive the barrel into place so that the slide stop/disconnector pin hole in both the barrel and receiver are aligned. The insertion of the slide stop/disconnector pin automatically sets the required headspace for the barrel as well as aligning the extractor with the slide.